NASA Policy Directive

NPD 8720.1B
Effective Date: April 29, 2004
Expiration Date: March 13, 2008

COMPLIANCE IS MANDATORY

Printable Format (PDF)

Subject: NASA Reliability and Maintainability (R&M) Program Policy (Revalidated 4/28/04)

Responsible Office: Office of Safety and Mission Assurance

1. POLICY

It is NASA policy for all programs and projects to accomplish the following during all phases of development and operations based upon mission requirements and the operational environment:

a. Plan, establish, document, and implement--

(1) System R&M design and operational performance requirements (qualitative and quantitative) (Requirement 13014).

(2) System maintenance concepts (Requirement 13032).

(3) Requirements and tasks for R&M engineering, analysis, and testing (including hardware, software, firmware, and human elements) (Requirement 13015).

(4) Timely and continuous assessment of the progress toward achieving the R&M requirements, including identification of areas for improvement (Requirement 13016).

(5) Integration of R&M processes, analytical activities, and data with systems engineering, risk management, and other processes, assessments, and analyses including, but not limited to, safety, security, quality, logistics, availability, probabilistic risk assessment, life-cycle cost, configuration management, and maintenance (Requirement 13033).

(6) Reserved.

b. Reserved.

2. APPLICABILITY

a. This NPD applies to NASA Headquarters and NASA Centers, including Component Facilities, and to the Jet Propulsion Laboratory to the extent specified in the contract.

b. This NPD does not apply to facility projects. Implementation of R&M on facilities shall be in accordance with NPD 8831.1, Management of Facilities Maintenance; NPR 8820.2, Facility Project Implementation Handbook; NPR 8831.2, Facilities Maintenance Management; NASA Reliability Centered Maintenance Guide for Facilities and Collateral Equipment; and NASA Reliability Centered Building and Equipment Acceptance Guide.

c. To the extent practicable, these policies shall apply to existing programs and/or projects.

3. AUTHORITY

42 U.S.C. 2473(c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.

4. REFERENCES

a. NPD 7500.1, Program and Project Logistics Policy.

b. NPD 8700.1, NASA Policy for Safety and Mission Success.

c. NPD 8831.1, Management of Facilities Maintenance.

d. NPR 7120.5, NASA Program and Project Management Processes and Requirements.

e. NPR 8000.4, Risk Management Procedural Requirements.

f. NPR 8820.2, Facility Project Implementation Handbook.

g. NPR 8831.2, Facilities Maintenance Management.

h. NASA-STD-8729.1, Planning, Developing, and Maintaining an Effective Reliability and Maintainability (R&M) Program. (Note: NASA-STD-8729.1 provides definitions for many of the reliability and maintainability terms used in this NPD.)

i. NASA Reliability Centered Maintenance Guide for Facilities and Collateral Equipment. URL: http://www.hq.nasa.gov/office/codej/codejx/rcm-iig.pdf,

j. NASA Reliability Centered Building and Equipment Acceptance Guide. URL: http://www.hq.nasa.gov/office/codej/codejx/commis11.doc

k. NASA Lessons Learned Information System (LLIS). URL: http://llis.gsfc.nasa.gov/

5. RESPONSIBILITY

a. Reserved

b. Enterprise Associate Administrators are responsible for sharing R&M data across programs and for using metrics for cost-effective management and evaluation of R&M performance of programs and projects under their cognizance (Requirement 13005).

c. Reserved

d. Program and project managers are responsible for the following:

(1) Integrating all R&M activities with the associated design and operation functions and associated program/project safety, quality assurance, risk management (including probabilistic risk assessment), and logistics (including maintenance) activities (Requirement 13009).

(2) Establishing a maintenance concept early in the system development and ensuring that compatibility is sustained among system design, maintenance planning, and logistics support activities (Requirement 13010).

(3) Establishing and maintaining a data collection system that provides a basis for generating the information to evaluate R&M performance throughout the system's life cycle (Requirement 13011).

(4) Identifying the organization(s) that will maintain the R&M data for the lifetime of the system and coordinating with the Center SMA functional manager to ensure that R&M data is available for use as heritage data (Requirement 13039).

(5) Reserved

e. The Center SMA functional manager is responsible for the following:

(1) Ensuring that R&M data is available for use as heritage data both to support current programs/projects at other Centers and to establish R&M goals and requirements for follow-on or new programs/projects (Requirement 13042).

(2) Reserved

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS

None.

8. CANCELLATION

NPD 8720.1A, dated March 13, 2003.

REVALIDATED

April 28, 2004

/s/ Sean O'Keefe
Administrator

ATTACHMENT A: (TEXT)

None.

(URL for Graphic)

None.

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